

b. Order Completion Measurements

52. We tentatively conclude, as set forth in Appendix A, that incumbent LECs must measure the Average Completion Interval⁷⁴ and the Percentage of Due Dates Missed for orders placed by their own retail customers and for orders placed by competing carriers. These measurements seek to assess whether an incumbent LEC processes and completes orders from competing carriers in the same time frame in which it processes and completes its own retail orders.⁷⁵

53. The measurement for the Average Completion Interval seeks to compare the average length of time it takes an incumbent LEC to complete orders for competing carriers with the average length of time it takes to complete comparable incumbent LEC retail orders. For competing carriers' orders, we tentatively conclude that an incumbent LEC must measure the interval from its receipt of a valid order⁷⁶ ("Order Submission Date and Time") at its OSS interface until the time it returns a completion notification to the competing carrier ("Date and Time of Notice of Completion"). For its own orders, we propose that an incumbent LEC measure the interval from when its service representative enters an end user customer's order into its order processing system ("Order Submission Date and Time") to the time it completes the order ("Completion Date and Time").⁷⁷ We seek comment on whether our proposed measurement for the Average Completion Interval is sufficient or whether greater or lesser detail is necessary.⁷⁸

⁷⁴ We note that in previous orders, the Commission has referred to such a measurement as the "average installation interval." See *Ameritech Michigan 271 Order*, 12 FCC Rcd at 20652-58, ¶¶ 204-213. Although we believe that the two terms are similar, we believe that "Average Completion Interval" more clearly describes the focus of the measurement, which is to measure the time required to complete an order, whether it requires a mere billing change or the dispatch of a technician.

⁷⁵ Throughout this Notice, we use the term "retail orders" to refer to orders placed by incumbent LEC retail customers; we do not intend this term to refer to orders associated with the incumbent LEC's use of local services for its internal or administrative purposes.

⁷⁶ As noted below, valid orders include those orders that have not been rejected by an incumbent LEC's OSS interface. Orders may be rejected if they fail to comply with syntax or formatting requirements in the order form, for example. See *infra* ¶ 60. We propose a separate measurement for order rejections below in our Order Quality Measurements section. See *infra*, Part IV.B.2.g.

⁷⁷ An order has been completed when each component of the order has been provisioned by the incumbent LEC. The initiation of customer billing, however, need not have begun.

⁷⁸ We note that the proposed Average Completion Interval measurement proposed in this proceeding differs somewhat from the *BellSouth South Carolina Order* discussion regarding the need for Average Installation Intervals. In the *BellSouth South Carolina Order*, we found that "the most meaningful average installation interval measure is the average time it takes from when BellSouth first receives an order from a competing carrier to when BellSouth provisions the service for that Order." *BellSouth South Carolina Order* at ¶ 41 (footnote omitted). The Commission was concerned in that Order with evidence of large numbers of the new

54. The Percentage of Due Dates Missed measurement seeks to determine whether the agreed-upon due dates for order completion are equally reliable for orders placed by competing carriers and orders placed by an incumbent LEC's end user customers. We tentatively conclude that an incumbent LEC must calculate this percentage by comparing the total number of orders not completed by the committed due date and time⁷⁹ during the specified reporting period to the total number of orders scheduled to be completed during that reporting period.⁸⁰ This same measurement would apply to orders for an incumbent LEC's customers and for orders submitted by competing carriers. We seek comment on whether our proposed measurement for Percentage of Due Dates Missed is appropriate or whether additional detail is necessary.

55. With respect to both the Average Completion Interval and Percentage of Due Dates Missed measurements, we tentatively conclude that certain exclusions should apply, as listed in Appendix A. Because we believe that an incumbent LEC should only measure orders during the time period in which the incumbent LEC has control over completion of the orders, we tentatively conclude that incumbent LECs should exclude orders canceled or supplemented⁸¹ by competing carriers from these measurements. We seek comment on whether additional exclusions are needed.

entrants' orders being rejected and having to be resubmitted before being accepted into BellSouth's ordering system. The Commission therefore concluded that simply measuring orders that had made it into the ordering system, as BellSouth proposed, did not present an accurate picture of how long it was taking orders to be completed. In this Notice, we propose to measure only "valid orders," that is, orders that have not been rejected, for the Average Completion Interval. In separate measurements described below, we seek comment on measurements that determine how many orders are being rejected, how long it is taking the incumbents to notify competing carriers that their orders are being rejected, and how often competing carriers have to resubmit orders. We also seek comment on how long it takes to notify competing carriers that orders are completed. We believe that this combination of measurements captures the concerns underlying the *BellSouth South Carolina Order*. In the *BellSouth South Carolina Order*, we also stated that the average installation interval measurement is complete at the time service is installed. Here we propose the end point to be when the incumbent notifies the competing carrier that service has been installed. We also propose to measure the time it takes to notify a competing carrier that its order has been completed (i.e., the Average Completion Notice Interval). The Average Installation Interval discussed in the *BellSouth South Carolina Order* can be derived from these two measurements, the Average Completion Interval and the Average Completion Notice Interval.

⁷⁹ An order has been completed by the committed due date if the incumbent LEC has returned a completion notification to the competing carrier by the date and time specified on the initial firm order confirmation ("FOC") returned by the incumbent LEC to the competing carrier.

⁸⁰ See *infra* Part V.B. discussing the proposed reporting period.

⁸¹ By orders supplemented by competing carriers, we mean initial orders that subsequently have been changed or modified by the competing carrier. These changed or modified orders would be measured as a new order when resubmitted.

56. We tentatively conclude that requiring both the Average Completion Interval and the Percentage of Due Dates Missed measurements are necessary to ensure that incumbent LECs are unable to mask discrimination. The Average Completion Interval allows competing carriers to assess whether the interval to complete their orders is similar to the interval to complete comparable incumbent LEC retail orders. The Percentage of Due Dates Missed allows competing carriers to assess whether the incumbent LEC's due date commitments -- that is, the date and time the incumbent LEC has promised to provision an order -- are equally reliable for competing carriers and the incumbent LEC's retail operations. Both of these factors directly influence customer perception. If a customer can obtain service more quickly from the incumbent, or if the competing carrier cannot initiate service to a customer when promised, the competing carrier's ability to compete is undermined. We, therefore, tentatively conclude that both the Average Completion Interval and Percentage of Due Dates Missed measurements are necessary to provide a complete picture of an incumbent LEC's ability to complete orders for competing carriers in a nondiscriminatory manner.⁸² We seek comment on this tentative conclusion.

c. Average Time for Coordinated Customer Conversions

57. We tentatively conclude that the incumbent LECs should measure the Average Coordinated Customer Conversion Interval, as set forth in Appendix A.⁸³ Specifically,

⁸² This conclusion is consistent with previous decisions made by the Commission in this area. In the *Ameritech Michigan 271 Order* and the *BellSouth Louisiana 271 Order*, the Commission found that average completion intervals for incumbent LEC and new entrant orders were necessary as evidence in determining whether a BOC is providing nondiscriminatory access to OSS functions. *Ameritech Michigan 271 Order*, 12 FCC Rcd at 20652-58, ¶¶ 204-213; *BellSouth Louisiana 271 Order* at ¶ 28, n. 98. In addition, among the conditions for approval of the Bell Atlantic/NYNEX merger, the Commission required Bell Atlantic, *inter alia*, to track both the Average Completion Time and the Percentage of Due Dates Missed. *Bell Atlantic/NYNEX Merger Order*, 12 FCC Rcd. at 20119-20, App. D, ¶¶ 9, 11. We also note that, under the Commission's Automated Reporting Management Information System (ARMIS) Service Quality Report (FCC Report 43-05), incumbent price cap LECs (both mandatory and elective) must measure annually, among other things, the percentage of commitments met and the average installation interval for their own local service orders. See *In the Matter of Revision of ARMIS Annual Summary Report (FCC Report 43-01)*, *ARMIS USOA Report (FCC Report 43-02)*, *ARMIS Joint Cost Report (FCC Report 43-03)*, *ARMIS Access Report (FCC Report (43-04)*, *ARMIS Service Quality Report (FCC Report 43-05)*, *ARMIS Customer Satisfaction Report (FCC Report 43-06)*, *ARMIS Infrastructure Report (FCC Report 43-07)*, and *ARMIS Operating Data Report (FCC Report 43-08) for Certain Class A and Tier 1 Telephone Companies*, Order, DA 97-2621, AAD 95-91, Attachment 5 at 10 (Com. Car. Bur. rel. Dec. 16, 1997) ("*ARMIS Revision Order*"). Finally, under the Commission's ONA nondiscrimination requirements, the BOCs and GTE are currently required to file quarterly reports measuring, among other things, the percentage of due dates missed and the average installation interval for their own affiliated enhanced service operations and for all other customers. See *In the Matter of Filing and Review of Open Network Architecture Plans*, Memorandum Opinion and Order, CC Docket No. 88-2, 5 FCC Rcd 3084, 3093-94 and App. B (1990) ("*BOC ONA Reconsideration Order*").

⁸³ We believe that the Average Coordinated Customer Conversion measurement is similar to the Coordinated Customer Conversion measurement proposed by TCG and the Percent of INP Coordinated Orders with Disconnection, Loop Provisioning, and Number Portability done within five minutes of Each Other

incumbent LECs must measure the average time it takes to disconnect an unbundled loop from the incumbent LEC's switch and cross connect it to a competing carrier's equipment with and without number portability. This performance measurement will assist in determining how long a customer switching to a competing carrier is without local exchange service when the competing carrier utilizes the incumbent LEC's unbundled loop, in conjunction with its own switching equipment, to provide such service. We believe that this measurement will assist in evaluating the incumbent LEC's provisioning of unbundled loops and the impact on competing carriers' customers.

d. Order Status Measurements

58. We have previously stated that a competing carrier must receive information on the status of its orders on the same basis as an incumbent LEC provides such notices to itself.⁸⁴ Timely notification of an order's status enables a competing carrier to inform its customer promptly of the progress of an order, or of any rescheduling or order change. By comparing the average time it takes a competing carrier to obtain information on the status of its orders to the average time it takes an incumbent LEC to inform its own retail customer service representative of the status of an order, a competing carrier can determine whether it is receiving notification of an order's status in a nondiscriminatory and just and reasonable manner.

59. We tentatively conclude that incumbent LECs must provide the following order status measurements set forth in Appendix A: (1) the Average Reject Notice Interval; (2) the Average Firm Order Confirmation (FOC) Notice Interval; (3) the Average Jeopardy Notice Interval; (4) the Percentage of Orders Given Jeopardy Notices; and (5) the Average Completion Notice Interval. We note that a number of incumbent LECs have indicated that they already report, or are willing to report, on some form of these notification intervals, either through average intervals or percentages within specified time intervals.⁸⁵ We tentatively conclude that all incumbent LECs must also measure these intervals for themselves, whether or not they have done so previously, in order to provide a basis for

measurement proposed by ALTS. See TCG, Model Performance Parity Measures for Facilities-Based Competition (Nov. 1997) (available at <http://www.tcg.com>); ALTS Jan. 14 *Ex Parte*.

⁸⁴ In the *BellSouth South Carolina 271 Order*, we explained that "[i]t is critical to a competing carrier's ability to compete that it receive information concerning the status of its customers' orders in substantially the same time and manner as the BOC provides such information to its retail operations." *BellSouth South Carolina 271 Order* ¶ 115 (citing *Ameritech Michigan 271 Order* at ¶ 186). At a minimum, the Commission has explained that order status notices must include order receipt, order rejection, firm order confirmation, order jeopardy, and order completion notices. *Id.* n. 347.

⁸⁵ See, e.g., Bell Atlantic Nov. 20 *Ex Parte*, Exhibit A at 3 (measures, among other things, average reject notice interval, average interval to return order completion notice); SNET Oct. 31 *Ex Parte* C, Attachment 3 at 2 (measures FOCs returned within 24 hours, installation appointments met, and notification of completed dispatch service orders).

comparison with the average intervals for competing carriers. A comparison of these times can provide information on whether the incumbent is providing nondiscriminatory access to competing carriers. We seek comment on these tentative conclusions. If an incumbent LEC does not currently provide itself with a certain form of notice (e.g., a FOC), we seek comment on the appropriate retail analog that should be measured. We also seek comment on whether all of these order status measurements are necessary to ensure that an incumbent LEC is providing access in a nondiscriminatory and just and reasonable manner.

60. The Average Reject Notice Interval seeks to measure the amount of time it takes an incumbent LEC to notify the competing carrier that an order has been rejected. An incumbent LEC typically sends an order rejection notice for invalid orders, such as those that have syntax or formatting errors in the order form. The Commission has previously explained that "[t]imely delivery of order rejection notices has a direct impact on a new entrant's ability to service its customers, because new entrants cannot correct errors and resubmit orders until they are notified of their rejection"⁸⁶ We tentatively conclude that an incumbent LEC must measure the time it takes to deliver such notices by using the measurement set forth in Appendix A. We propose that an incumbent LEC measure this interval from the time it receives an order at its OSS interface to the time the rejection notice leaves its gateway. We seek comment on these tentative conclusions.

61. The Average FOC Notice Interval seeks to measure the amount of time it takes an incumbent LEC to send a competing carrier a notice confirming the order. Competing carriers rely on FOC notices to apprise their customers of due dates.⁸⁷ We tentatively conclude that an incumbent LEC must measure the time it takes to deliver a FOC notice by using the measurement set forth in Appendix A. We also tentatively conclude that the incumbent LEC must measure this interval from the time it received a valid order⁸⁸ at its OSS interface from the competing carrier to the time the FOC leaves its OSS interface and is transmitted to the competing carrier. Because this interval measures only valid orders, we tentatively conclude that incumbent LECs must exclude rejected orders from this measurement. We seek comment on these tentative conclusions.

62. The Average Jeopardy Notice Interval attempts to determine how far in advance a competing carrier receives notice that its customer's order is in jeopardy of not being completed as scheduled, compared to how far in advance an incumbent LEC's service representative receives such notice. The Commission has previously explained that competing carriers need timely order jeopardy notices to inform their customers of the potential need to

⁸⁶ *BellSouth South Carolina 271 Order* at ¶ 117.

⁸⁷ *See id.* at ¶ 115. The Commission has noted that "[d]elays in the return of the FOC notice therefore delay a new entrant's ability to inform its customers when service will begin." *BellSouth South Carolina 271 Order* at ¶ 122; *BellSouth Louisiana 271 Order* at ¶ 35.

⁸⁸ A valid order is an order that has not been rejected for formatting or other reasons. *See supra* note 77.

reschedule the time for service installation.⁸⁹ We tentatively conclude that incumbent LECs must measure the amount of time between the originally scheduled order completion date and time (as stated on the FOC) and the date and time a notice leaves the incumbent LEC's interface informing the carrier that the order is in jeopardy of missing the originally scheduled date, as set forth in Appendix A. We seek comment on this tentative conclusion.

63. We also tentatively conclude that incumbent LECs must measure the Percentage of Orders Given Jeopardy Notices using the measurement set forth in Appendix A. This measurement determines the percentage of orders for which the incumbent LEC provides notice of being in jeopardy of not being completed on time for any reason. This information will enable a competing carrier to determine whether a significantly higher percentage of its orders are placed in jeopardy than an incumbent LEC's retail orders. Although there are many reasons why orders are placed in jeopardy, a higher jeopardy rate for competing carriers might reflect a discriminatory preference by an incumbent LEC to complete its own orders first. Additionally, a competing carrier should receive a jeopardy notice for each of its orders that the incumbent LEC fails to complete on time. A competing carrier can determine whether it is receiving this requisite advance notice by comparing the Percentage of Orders Given Jeopardy Notices to the Percentage Due Dates Missed measurement.

64. Finally, the Average Completion Notice Interval measures the amount of time it takes an incumbent LEC to send a competing carrier notice that work on an order has been completed. Prompt receipt of a completion notice is critical because, among other things, this notice informs the competing carrier that it may begin billing the customer for service. More fundamentally, this notice informs the competing carrier that its formal relationship with a new customer has begun. We tentatively conclude that an incumbent LEC must use the measurement set forth in Appendix A and must measure the interval by subtracting the date and time that it completed the work from the date and time a valid completion notice leaves its OSS interface. We seek comment on these tentative conclusions.

e. Average Interval for Held Orders

65. We tentatively conclude that incumbent LECs must measure the Average Interval for Held Orders, as described in Appendix A. This measurement seeks to capture the time required to complete held orders, *i.e.*, those orders pending at the end of the reporting period whose committed due dates have passed. For example, if incumbent LECs report on a monthly basis, a held order would be any order that is overdue at the end of the month. By measuring those orders whose due dates have passed, the Average Held Order measurement will capture those orders not covered by the Average Completion Interval measurement, which measures orders that are completed by the committed due date. We believe that the Average Interval for Held Orders measurement will enable a requesting carrier to determine whether the average period that its orders are pending after the committed due date is no

⁸⁹ See *BellSouth South Carolina 271 Order* at ¶ 130; *BellSouth Louisiana 271 Order* at ¶ 39.

longer than the average period for similar incumbent LEC pending orders. We seek comment on the utility of measuring the average interval for held orders and whether the measurement described below accurately captures the necessary information.

66. To arrive at the Average Interval for Held Orders, we tentatively conclude that the incumbent LEC should first identify all orders with a FOC listing a due date prior to the end of the reporting period in question for which a valid completion notice has not yet been issued. The held order interval for a particular order is the number of calendar days between the completion date listed on that order's FOC and the close of the reporting period. The Average Interval for Held Orders is then calculated by dividing the total number of days since the due date up to the reporting period close date by the number of held orders. Incumbent LECs should measure the Average Interval for Held Orders for both competing carrier orders and their own retail customer orders. We propose that incumbent LECs exclude from this measurement those orders cancelled by a competing carrier, as listed in Appendix A. We seek comment on whether these exclusions will assist in producing meaningful results and on whether additional exclusions are needed.

67. We note that certain incumbent LECs have indicated that they currently provide, or are willing to provide, a measurement for percentage of held orders due to lack of facilities.⁹⁰ We have proposed a broader measurement that would not be limited to orders that are not completed due to lack of facilities, but rather would cover all uncompleted orders with passed due dates. Because incumbent LECs and requesting carriers are still learning how to manage and work with the operations support systems, we tentatively conclude that a broader measurement, such as the one proposed above, will be more useful because it will capture all instances when an order is not completed rather than just those instances when an order is not completed due to lack of facilities. We seek comment on our tentative conclusion.

f. Installation Troubles

68. We tentatively conclude that an incumbent LEC must measure the Percentage of Troubles in Thirty Days for New Orders. We believe that incumbent LECs must calculate the percentage of new orders for which a competing carrier, or incumbent LEC customer service representative, receives complaints that there is a problem with the service within the first thirty days after completion of the order. Trouble reports often indicate that a customer has not received the exact service ordered, either because the carrier provided the wrong type of service or a lower quality of service than expected. We believe, therefore, that this measurement will provide information about whether the incumbent LEC processed the order accurately. Accordingly, we propose that incumbents LECs measure the Percentage of Troubles in Thirty Days for New Orders as a substitute for LCUG's proposed measurement of

⁹⁰ See, e.g., SBC Sept. 5 *Ex Parte*, Attachment at 3; Bell Atlantic Nov. 20 *Ex Parte*, Exhibit A at 4.

Percentage Orders Processed Accurately.⁹¹ We believe that the Percentage of Troubles in Thirty Days for New Orders will provide the information sought by LCUG, but will be a less burdensome measurement than measuring order accuracy, which requires an incumbent LEC to compare the original account profile and order sent by the competing carrier to the account profile following completion of the order. Nevertheless, we seek comment on using this measurement as a substitute for order accuracy. We also seek comment on whether thirty days is an appropriate cut-off for measuring trouble reports for new orders.

69. Although we make no tentative conclusions regarding the specific measurement needed to measure the Percentage of Troubles in Thirty Days for New Orders, we seek comment on the measurement set forth in Appendix A. Specifically, we seek comment on whether this measurement should be disaggregated in the same way as the other ordering and provisioning measurements. It may not be appropriate, for example, to include interconnection trunks because any problems relating to such trunks will likely affect many customers on the competing carrier's network, rather than one specific customer. We seek comment on whether interconnection trunks, or any other categories of disaggregation, should be eliminated for this measurement.

70. Finally, we seek comment on whether it is appropriate to measure percentage troubles on a "per order" basis. We seek comment on whether tracking troubles on a per order basis might mask a higher number of troubles for larger orders. For example, an order of forty new lines may have several problems and yet would be reported as having only one trouble report. We therefore seek comment on whether a "per circuit" basis for resale orders and "per element" basis for unbundled network element orders might be more useful than a "per order" basis.

g. Ordering Quality Measurements

1. Order Flow Through

71. An incumbent LEC's internal ordering system permits its retail service representatives to submit retail customer orders electronically, directly into the ordering system.⁹² This is known as "flow through." Similarly, a competing carrier's orders "flow through" if they are transmitted electronically (*i.e.*, with no manual intervention) through the gateway into the incumbent LEC's ordering systems. Order Flow Through applies solely to the OSS ordering function, not the OSS provisioning function. In other words, Order Flow

⁹¹ LCUG proposal at 26. A number of incumbent LECs have proposed substituting an installation troubles measurement for a measurement for order accuracy. *See, e.g.*, Ameritech Nov. 18 *Ex Parte*, Attachment at 2; Bell Atlantic Nov. 20 *Ex Parte*, Exhibit A at 5.

⁹² For example, the Department of Justice noted that 97 percent of BellSouth's residential orders and 81 percent of its business orders are processed electronically (that is, without additional human intervention once the order is submitted into the system). *BellSouth South Carolina 271 Order* at ¶ 104.

Through measures only how the competing carrier's order is transmitted to the incumbent's back office ordering system, not how the incumbent ultimately completes that order. Electronically processed service orders are more likely to be completed and less prone to human error than orders that require some degree of human intervention.⁹³

72. We tentatively conclude that incumbent LECs should measure the percentage of competing carriers' orders that flow through electronically to the incumbent LECs' ordering systems, as set forth in Appendix A. The Percentage of Order Flow Through measurement seeks to calculate the percentage of orders that an incumbent LEC processes electronically through its gateway and accepts into its back office systems without manual intervention (*i.e.*, without additional human intervention once the order is submitted into the system). This measurement only applies to valid orders, that is, orders that have not been rejected for some reason.⁹⁴ A separate measurement for rejected orders is discussed below.

73. We believe that the Order Flow Through measurement is necessary to determine whether an incumbent LEC is able to process orders for competing carriers in a nondiscriminatory manner. This measurement also serves as a yardstick to evaluate whether an incumbent LEC's OSS is capable of handling reasonably foreseeable commercial volumes of orders.⁹⁵ If a LEC processes a substantial number of orders manually, rather than electronically, a competing carrier may be effectively prevented from increasing its order volume due to the increased likelihood of errors and delays in order completion.⁹⁶ An incumbent LEC's failure to ensure adequate order flow through could also have a direct impact on the competing carrier's ability to provide service in a timely manner to its end user customers.

74. We tentatively conclude that the Order Flow Through measurement must be disaggregated by the following categories, as set forth in Appendix A: (1) resale POTS; (2) resale specials; (3) network elements; and (4) combinations of network elements. We note that the proposed categories for the Order Flow Through measurement are less detailed than the categories proposed for the other measurements relating to the ordering process (*e.g.*, order completion and order status measurements). We believe this distinction is justified because the Order Flow Through measurement focuses solely on the OSS ordering function,

⁹³ See *Ameritech Michigan 271 Order*, 12 FCC Rcd at 20634-35, at ¶¶ 172-73.

⁹⁴ For a discussion of valid orders, see *supra* note 77.

⁹⁵ See *Ameritech Michigan 271 Order*, 12 FCC Rcd at 20634-49, ¶¶ 172-199 (Commission found a direct correlation between mechanized order processing (*i.e.*, flow-through) and the BOC's ability to provide competing carriers with nondiscriminatory access to OSS functions); *BellSouth South Carolina 271 Order* at ¶ 107 (Commission found that low percentage of order flow-through for resale orders was a substantial factor in BOC's inability to provision resale services on a timely basis). See also *Bell Atlantic/NYNEX Merger Order* at ¶ 182 and Appendix C and D (requiring order flow-through measurement as a condition of the merger approval).

⁹⁶ See, *e.g.*, *Ameritech Michigan 271 Order*, 12 FCC Rcd at 20634-20650, ¶¶ 172-199.

whereas the other proposed measurements (*i.e.*, those regarding order completion and order status) also focus on the OSS provisioning function. In the provisioning context, there may be substantial differences in the time required to provide various types of unbundled network elements and services. For example, the time required to complete certain orders may vary based on whether an order requires a dispatch, or merely a billing change. In the order flow through context, such issues are irrelevant. The method of ordering resold services and network elements is not likely to vary between residential and business customers. We seek comment on the proposed levels of disaggregation for the Order Flow Through measurement and whether further disaggregation is necessary.

2. Order Rejections

75. We tentatively conclude that incumbent LECs must report on the Percentage of Rejected Orders. We also tentatively conclude that this measurement must be reported to the same level of disaggregation as the Order Flow Through measurement. The Percentage of Rejected Orders measurement, as shown in Appendix A, would determine the percentage of total orders received electronically that are rejected.⁹⁷ We believe that this measurement is useful in several respects. For example, a significantly high rejection rate for a competing carrier could reflect problems in obtaining access to the incumbent LEC's ordering system. A high rejection rate might also indicate problems with the ordering interface used by a competing carrier, or that an incumbent LEC has failed to provide adequate business rules to explain how to input ordering data.⁹⁸ In conjunction with the Order Flow Through measurement, the Order Rejection measurement can provide valuable information regarding the operational readiness of an incumbent LEC's OSS. A high order flow through percentage may be less meaningful if the carrier also has a high percentage of rejected orders. Using the Order Rejection measurement and the Order Flow Through measurement, a competing carrier can gauge the number of orders that are likely to be rejected at the gateway, the number that will flow through, and the number that will require manual processing.⁹⁹

76. In addition to the above measurement, we seek comment on whether incumbent LECs should report on the average number of times an order must be resubmitted before it is

⁹⁷ This measurement was proposed, for example, by BellSouth in Georgia Docket No. 7892-U. See Letter from Kathleen B. Levitz, BellSouth, to Magalie Roman Salas, Secretary, FCC, (filed January 23, 1998) (BellSouth Jan. 23 *Ex Parte*)

⁹⁸ "Business rules refer to the protocols that a BOC uses to ensure uniformity in the format of orders." *Ameritech Michigan 271 Order*, 12 FCC Rcd at 20617, ¶ 137, n. 335. We recognize that other factors, such as a competing carrier's failure to train its employees properly, could contribute to a high order rejection rate. Measuring the percentage of rejections, however, will alert the competing carrier that there is a potential problem with its own procedures and personnel or with the incumbent LEC.

⁹⁹ The difference between the total number of orders transmitted and the sum of flow through orders and rejected orders provides the number of orders requiring manual processing.

finally accepted as a valid order.¹⁰⁰ The Average Submissions per Order measurement, as set forth in Appendix A, would require incumbent LECs to measure the number of orders accepted for provisioning and the number of orders rejected during the reporting period in order to calculate the total number of order submissions in the reporting period. The total number of order submissions would then be divided by the total number of orders accepted for provisioning in the reporting period. We believe that this measurement could reflect the quality of access to an incumbent LEC's ordering system. If a carrier must resubmit the same order multiple times, it may indicate that there are problems with the incumbent LEC's gateway or error checking systems, or that the competing carrier does not have an adequate understanding of the incumbent LEC's internal business rules.

h. 911 Database Update and Accuracy

77. One of the OSS databases used in ordering and provisioning services and facilities to competing carriers is the 911/E911 database. We seek comment on whether incumbent LECs should measure the provision of 911 and E911 emergency services to competing carriers. The accuracy of 911 and E911 database updates was identified as an important issue in the *Ameritech Michigan 271 Order*.¹⁰¹ We seek comment on whether federal reporting requirements are necessary to monitor possible discrimination, or whether the states' existing oversight functions of 911 and E911 database services adequately monitor carrier-to-carrier discrimination.

78. We also seek comment on what particular measurements would be useful if we were to adopt reporting requirements in this area. In particular, we seek comment on the utility of measuring the Percentage of Accurate Updates for incumbent LEC and competing carrier customers, as proposed in Appendix A. Such a measurement might assist a competing carrier in determining whether there is discriminatory treatment in updating these databases.¹⁰²

79. We also seek comment on the utility of measuring the timeliness of updates to the 911 and E911 databases, as proposed in Appendix A. We seek comment on whether

¹⁰⁰ See *BellSouth Jan. 23 Ex Parte*.

¹⁰¹ See *Ameritech Michigan 271 Order* at ¶¶ 261-279. In that order, the Commission found that Ameritech failed to meet its duty to provide nondiscriminatory access to 911 and E911 databases because Ameritech maintained entries in its 911 database for its own customers with greater accuracy and reliability than entries for customers of competing carriers. Additionally, in response to BellSouth's section 271 application for the state of South Carolina, the Department of Justice noted that 911 and E911 measurements are important to guard against discrimination. We note that in the *BellSouth South Carolina 271 Order*, we found that BellSouth had met the 911 checklist requirement. See *BellSouth South Carolina 271 Order* at ¶¶ 225-230.

¹⁰² In the *Ameritech Michigan 271 Order*, the Commission noted that Ameritech's failure to report on the accuracy of 911 and E911 databases for competing carriers was a significant issue because Ameritech's error rate for customers of competing carriers was alleged to be higher than for incumbent LEC customers. *Ameritech Michigan 271 Order* at ¶¶ 267-68.

incumbent LECs should measure the Percentage of Missed Due Dates by establishing due dates, or specific time frames, for updating databases. Alternatively, we seek comment on whether incumbent LECs should measure the Average Time to Update the 911 and E911 Databases.¹⁰³

3. Repair and Maintenance Measurements

80. We tentatively conclude that incumbent LECs must provide measurements for certain aspects of their repair and maintenance services. We note that, regardless of whether it obtains resold services or unbundled network elements from an incumbent LEC, a competing carrier remains dependent upon the incumbent LEC for repair and maintenance services. Customers will be dissatisfied with competing carrier service if they perceive that service problems are not resolved promptly or that there is a high incidence of repeated service problems associated with the competing carrier's service.

81. We tentatively conclude that incumbent LECs must provide the following repair and maintenance measurements, as listed in Appendix A: (1) Average Time to Restore; (2) Frequency of Troubles in a Thirty Day Period; (3) Frequency of Repeat Troubles in a Thirty Day Period; and (4) Percentage of Customer Troubles Resolved within the Estimated Time.¹⁰⁴ Incumbent LECs must calculate these measurements for themselves and for competing carriers. We seek comment on whether these four measurements are sufficient to assess whether incumbent LECs provide repair and maintenance in a nondiscriminatory manner, or whether this assessment could be done with fewer measurements.¹⁰⁵ In addition, we seek comment on whether incumbent LECs should disaggregate the repair and maintenance measurements in the manner described above with respect to the ordering and provisioning measurements.

¹⁰³ We note that ALTS proposes measuring the "Mean Database Update Interval" and the "Percentage of Updates Completed within 24 Hours." ALTS Proposal at 18-19.

¹⁰⁴ Most of the proposed repair and maintenance measurements are standard measurements that various incumbent LECs already provide or have indicated a willingness to provide. See, e.g., Ameritech Nov. 18 *Ex Parte*, Att. A at 3 (measures Mean Time to Repair, % Repeats, Trouble Report Rate, among other things); Bell Atlantic Nov. 20 *Ex Parte*, Exh. A at 5 (measures Mean Time to Repair, % Repeat Troubles in 30 Days, and Customer Trouble Report Rate, among other things); SNET Oct. 31 *Ex Parte*, Att. 3 at 2 (measurements include Mean Time to Repair and Network Reports per 100 Lines). Several of the proposed repair and maintenance measurements are similar to measurements that various incumbent LECs currently provide pursuant to other Commission requirements, such as ARMIS and ONA. For example, ARMIS requires price cap LECs to provide a measurement for repair intervals and a measurement for repeat trouble reports. *ARMIS Revision Order*, Attachment 5 at 12. These measurements are similar to the proposed measurements for the Average Time to Restore and the Frequency of Repeat Troubles respectively. Likewise, under ONA, the BOCs and GTE must report on the average interval for providing maintenance services, which is similar to the proposed measurement for Average Time to Restore. *BOC ONA Reconsideration Order* at ¶¶ 73-80 and App. B.

¹⁰⁵ These measurements seek to ensure that an incumbent LEC is complying with its statutory requirements under section 251(c). See *supra* ¶¶ 28, 29.

82. The Average Time to Restore measurement allows a competing carrier to gauge whether its customers' services are repaired in the same time frame as that of the incumbent LEC's customers. As shown in Appendix A, the Average Time to Restore measures the time from when a service problem is reported to the incumbent LEC (*i.e.*, when a "trouble ticket" is logged) to the time when the incumbent LEC returns a trouble ticket resolution notification to the competing carrier.

83. The Frequency of Troubles in a Thirty Day Period measurement reports the percentage of access lines that receive trouble tickets in a thirty day period. This measurement permits a competing carrier to determine on an ongoing basis whether its customers experience more frequent incidents of trouble than the incumbent LEC's end users. Disparity in this measurement may indicate differences in the underlying quality of the network components supplied by the incumbent LEC. We propose that this measurement should be calculated as indicated in Appendix A. We seek comment on whether thirty days is an appropriate time frame.

84. The Frequency of Repeat Troubles in a Thirty Day Period measurement calculates the percentage of trouble tickets that are repeat trouble tickets. Any differences in this measurement may indicate that the incumbent LEC provides inferior maintenance support in the initial resolution of troubles or, in the alternative, that the incumbent LEC supplies network components of an inferior quality. As demonstrated in Appendix A, the Frequency of Repeat Troubles in a Thirty Day Period measurement is calculated by dividing the number of repeat troubles generated in a thirty day period by the total number of trouble tickets received in the same thirty day period. Again, we seek comment on whether thirty days is an appropriate time frame.

85. The Percentage of Customer Troubles Resolved Within the Estimated Time measures whether the estimated times for repairs the incumbent LEC reports to competing carriers are as reliable as the estimated times the incumbent LEC provides to its end user customers. The reliability of these estimates are critical to a competing carrier's ability to retain customers because customers expect their service to be restored within the promised time frame. From the customer's perspective, the failure to fulfill such a commitment aggravates an already unsatisfactory situation. The Percentage of Customer Troubles Resolved Within the Estimated Time measurement must be calculated in the manner described in Appendix A. We note that Appendix A lists interconnection trunks as a separate category for reporting on the repair and maintenance measurements. Recognizing that troubles on interconnection trunks may not be customer specific, we seek comment on the utility of requiring incumbent LECs to report on the Percentage of Customer Troubles Resolved Within the Estimated Time with respect to interconnection trunks.

86. We note that LCUG has proposed measurement categories for the Average Time to Restore measurement based on the disposition and cause of the trouble.¹⁰⁶ We seek comment on whether most carriers use the disposition and cause categories proposed by LCUG, and whether such a breakdown would be useful for the repair and maintenance measurements. We also seek comment on whether such a breakdown would place undue burdens on incumbent LECs.

87. As listed in Appendix A, we tentatively conclude that incumbent LECs should exclude the following types of trouble reports from the measurements described above: 1) trouble tickets that are cancelled by the competing carrier; 2) incumbent LEC trouble reports associated with the internal or administrative use of local service; and 3) instances where the customer requests a ticket be "held open" for monitoring.¹⁰⁷ With respect to the Frequency of Repeat Troubles measurement, we tentatively conclude that incumbent LECs should exclude subsequent trouble reports on maintenance tickets that have not been reported as resolved or closed. We seek comment on whether these exclusions will assist in producing meaningful results and whether additional exclusions are needed.

4. Billing Measurements

88. As noted above, an incumbent LEC must provide nondiscriminatory access to billing, as one of the five OSS functions identified by the Commission in the *Local Competition First Report and Order*.¹⁰⁸ A competing carrier is dependent on an incumbent LEC to obtain billing information, regardless of whether it uses unbundled network elements or resold services. Two types of billing information a competing carrier must obtain from an incumbent LEC are: 1) customer usage records (*i.e.*, those records detailing each end user's use of the incumbent's services); and 2) billing invoices, which establish the amount the competing carrier owes the incumbent LEC for use of its services or facilities. A competing carrier needs timely access to customer usage records because this information provides the basis for billing end users. Prompt delivery of customer usage records therefore permits the competing carrier to bill its customers in a timely manner. Timely delivery of billing invoices is also necessary so that a competing carrier can have prompt notification of the amount it owes an incumbent LEC for use of the incumbent's services.

¹⁰⁶ LCUG proposal at 33 and 57. LCUG proposes the following disposition and cause categories: 1) out of service no dispatch; 2) out of service with dispatch; 3) hold open for monitoring; 4) customer premise equipment trouble (including inside wire); 5) no trouble found; 6) central office equipment; 7) interoffice facilities; 8) loop/access line; 9) all other troubles; and 10) no access.

¹⁰⁷ Such a situation might arise if, after the incumbent LEC has completed the repair work, the customer must do some additional testing at his end before concluding that the repair work is satisfactory.

¹⁰⁸ *Local Competition First Report and Order*, 11 FCC Rcd at 15766, ¶ 523.

89. We tentatively conclude that a competing carrier can determine whether it is obtaining nondiscriminatory access to these two sets of billing records by obtaining performance measurements on the Average Time to Provide Usage Records and the Average Time to Deliver Invoices, as set forth in Appendix A.¹⁰⁹ The first measurement (Average Time to Provide Usage Records) seeks to capture the average time it takes an incumbent LEC to provide customer usage records. We tentatively conclude that incumbent LECs should use the measurements for the Average Time to Provide Usage Records in Appendix A in calculating the intervals for competing carriers and for their own retail use. For competing carriers, an incumbent LEC must compare the date and time it records usage data with the date and time it transmits the records from its OSS gateway to the competing carrier. For its own retail use, we propose that an incumbent LEC measure the elapsed time between the date and time of recording the usage record to the date and time it reformats the record on an Electronic Message Record (EMR),¹¹⁰ or an equivalent, format. We seek comment on these measurements. Additionally, we understand that files and billing for local usage, exchange access usage, and alternately billed usage are separated in the actual billing process,¹¹¹ and we seek comment on whether incumbent LECs should disaggregate the Average Time to Provide Usage Records into these three groups.

90. The second measurement (Average Time to Deliver Invoices) seeks to measure the average time it takes an incumbent LEC to transmit a billing invoice to a competing carrier for charges related to resale and/or network elements. We tentatively conclude that incumbent LECs should calculate the Average Time to Deliver Invoices in accordance with Appendix A. For competing carriers, an incumbent LEC must compare the date and time it transmits the invoices to the competing carrier to the date and time the billing cycle closes. For an incumbent LEC's own retail use, LCUG has proposed that an incumbent LEC compare the date and time the customer's bills are produced in electronic format (whether or not they are distributed) to the date and time the billing cycle closes.¹¹² We seek comment on this proposal for retail use and on our tentative conclusion regarding the appropriate measurement for competing carriers. We also seek comment on whether incumbent LECs should report separately for wholesale bill invoices and unbundled element bill invoices for competing

¹⁰⁹ These measurements seek to ensure that an incumbent LEC is complying with the statutory requirements of section 251(c). *See supra* ¶¶ 28, 29. We note that a number of incumbent LECs already report on billing timeliness in some format. *See, e.g.,* SBC Sept. 5 *Ex Parte*, Att. 1 to Exh. A at 1-2 (measures billing timeliness by bill type); Ameritech Nov. 18 *Ex Parte*, Att. A at 4 (measures Average Time to Send Usage and Mean Time to Deliver Invoices).

¹¹⁰ "Electronic Message Registration" is a system that detects and counts a phone user's completed local calls and computes the number of message units used. *See Newton's Telecom Dictionary*, 11th Edition at 218 (1996). The "electronic message record" is a record of those calls and message units.

¹¹¹ "Exchange access usage" refers to interexchange usage by customers. "Alternately billed usage" refers to bill-to-third party, collect call, and credit card usage.

¹¹² LCUG proposal at 45.

carriers. Finally, we seek comment on whether any other measurements for billing are appropriate.

5. General Measurements

a. Systems Availability

91. We tentatively conclude that an incumbent LEC must measure the percentage of time its electronic interfaces for each OSS function are actually operational as compared to the scheduled availability, as noted in Appendix A.¹¹³ We propose that an incumbent LEC calculate this measurement by comparing the total time it provides access to a particular interface during the reporting period to the total time the interface was scheduled to be available during the reporting period. We also propose that an incumbent LEC compare the total time its own systems are available to its service representatives to the amount of time that those systems should have been available during the reporting period. We believe that this measurement will assist in determining whether the incumbent LEC provides nondiscriminatory access to its electronic interfaces. We believe that both prolonged outages and frequent unavailability of electronic access to an incumbent LEC's OSS interfaces may significantly and adversely affect a competing carrier's ability to provide service to end users. As noted in Appendix A, we tentatively conclude that this measurement must be disaggregated by interface type, such as EDI and GUI, as well as by each separate OSS function provided by the incumbent LEC to competing carriers (e.g., pre-ordering, ordering, provisioning, repair and maintenance, and billing). We seek comment on our tentative conclusions regarding systems availability measurements.

b. Center Responsiveness

92. We tentatively conclude that an incumbent LEC must measure the average time to answer calls from competing carriers to an incumbent LEC's wholesale service center, as noted in Appendix A.¹¹⁴ We propose that an incumbent LEC calculate this measurement by tracking the time elapsed from when the service center's call management system is prompted by an incoming call from a competing carrier until the call is answered by an incumbent LEC's service representative.¹¹⁵ Although the period required for an incumbent LEC representative to answer calls from competing carriers may not have a direct impact on a competing carrier's end user customers, the quality of service a competing carrier is able to

¹¹³ This measurement seeks to ensure that an incumbent LEC is providing OSS in a manner that is consistent with the statutory requirements of section 251(c). See *supra* ¶¶ 28, 29.

¹¹⁴ The incumbent LEC's service center is a single point of contact for service representatives of competing carriers to direct their service-related inquiries (e.g., general information regarding ordering forms, status of orders, etc.).

¹¹⁵ We emphasize that this measurement only pertains to live, person-to-person contacts between carriers.

provide to its customers depends, at least in part, upon the service it receives from the incumbent LEC. For example, delays in contacting the incumbent LEC's service center can cause delays in a competing carrier's ability to serve its own customers. We seek comment on our tentative conclusion to require a measurement for center responsiveness.¹¹⁶

c. Operator Services and Directory Assistance

93. We tentatively conclude that an incumbent LEC must measure the average time it takes its own end user customers and those of competing carriers to access the incumbent LEC's operator services and directory assistance databases or operators.¹¹⁷ We believe that it is important for incumbent LECs to provide nondiscriminatory access to OS/DA databases and operators because customer perception can be shaped by perceived disparities in the quality of access to OS/DA services provided by a competing carrier and an incumbent LEC. We seek comment on the specific measurement described in Appendix A.

94. Incumbent LECs appear to be able to provide separate measurement results for competing carriers that use dedicated trunks to access the incumbent LEC's OS/DA database or operators.¹¹⁸ Therefore, we tentatively conclude that incumbent LECs must provide separate measurement results in such instances. We seek comment, however, on whether, for purposes of disaggregation, an incumbent LEC is able to differentiate between OS/DA calls from its own end user customers and customers of competing carriers if all such calls are carried over the same OS/DA trunk groups.

6. Interconnection Measurements

95. As previously noted, section 251(c)(2) of the Act requires incumbent LECs to provide interconnection to competing carriers at the same level of quality as used in their own networks.¹¹⁹ We tentatively conclude that incumbent LECs must measure the quality of interconnection through three different means. As discussed above, we tentatively conclude

¹¹⁶ This measurement seeks to ensure that an incumbent LEC is complying with the statutory requirements of section 251(c). *See supra* ¶¶ 28, 29.

¹¹⁷ This measurement seeks to ensure that an incumbent LEC is complying with the statutory requirements of section 251(c). *See supra* ¶ 30.

¹¹⁸ This might occur when a competing carrier requests custom routing through dedicated trunks in order to brand the call with the competing carrier's name.

¹¹⁹ The Commission concluded that section 251(c)(2)(C) "requires an incumbent LEC to provide interconnection between its network and that of a requesting carrier at a level of quality that is at least indistinguishable from that which the incumbent provides itself, a subsidiary, an affiliate, or any other party. . . . [T]his duty requires incumbent LECs to design interconnection facilities to meet the same technical criteria and service standards, such as probability of blocking in peak hours and transmission standards, that are used within their own networks." *See Local Competition First Report and Order*, 11 FCC Rcd at 15614-15, ¶ 224.

that incumbent LECs must report separately for interconnection trunks when disaggregating the ordering and provisioning measurements, as well as the repair and maintenance measurements.¹²⁰ We also tentatively conclude, as discussed below, that incumbent LECs must report on two sets of interconnection measurements, one for trunk blockage and one for collocation. These two sets of measurements are intended to reveal the quality of interconnection provided to competing carriers.¹²¹

a. Trunk Blockage

96. We tentatively conclude that incumbent LECs must measure trunk blockage, *i.e.*, blockage on final trunk groups within their networks.¹²² Blockage on these final trunk groups prevents end user calls from reaching their final destination. The inability of a competing carrier's end users to complete or receive calls has a direct impact on the customer's perception of the competing carrier's quality of service.

97. We believe that competing carriers' traffic can be blocked at two critical points: (1) interconnection trunk groups (*e.g.*, those trunk groups connecting the incumbent LEC's end offices, access tandems, or local tandems with a competing carrier's network); or (2) common trunk groups¹²³ located within the incumbent LEC's network behind the point of interconnection (*e.g.*, trunks connecting the incumbent's tandem switch with other points in the incumbent LEC's network). We therefore tentatively conclude that an incumbent LEC measure on blockage on both sets of trunk groups, as set forth in Appendix A.¹²⁴ We seek comment on these tentative conclusions.

98. We seek comment on certain general issues associated with measuring trunk blockage. We recognize that inferior service is generally indicated by repeated blockage on the same final trunk groups. We therefore seek comment on whether incumbent LECs should measure whether there is repeated blockage over the same trunk groups for an ongoing period,

¹²⁰ See *supra* ¶ 51.

¹²¹ This measurement seeks to ensure that an incumbent LEC is complying with the statutory requirements of section 251(c). See *supra* ¶ 30.

¹²² "Final trunk groups" are those trunk groups that provide the last available path for overflow traffic and may also receive first-route traffic for which there is no alternate route.

¹²³ Common trunk groups are those transport facilities carrying incumbent LEC, competing carrier, and other carriers' traffic. Competing carrier's traffic over common trunk groups include both calls originating and terminating on the competing carrier's network.

¹²⁴ The Commission required Bell Atlantic to report on interconnection trunk blockage and common trunk blockage in the *Bell Atlantic/NYNEX* merger commitments. See *Bell Atlantic/NYNEX Merger Order*, 12 FCC Rcd at 20123, App. D, ¶¶ 19 and 20.

such as three consecutive months.¹²⁵ We also seek comment on whether incumbent LECs should report on blockage exceeding a certain blocking standard for both interconnection and common trunk group measurements. In the *Bell Atlantic/NYNEX Merger Order*, for example, the Commission required Bell Atlantic to report on blockage exceeding a blocking standard of B.01 for interconnection trunks and B.005 for common trunks.¹²⁶ We seek comment on whether incumbent LECs should measure blockage exceeding these standards for the above measurements.

99. We also seek comment on methods by which parties may evaluate whether incumbent LECs are providing interconnection in compliance with their statutory obligations under section 251(c)(2). With respect to interconnection trunks, we seek comment on the utility of comparing blockage on interconnection trunks and blockage on the incumbent LEC's interoffice trunk groups carrying its retail customers' traffic. In the *Ameritech Michigan 271* proceeding, Ameritech provided data on trunk blockage rates for both groups.¹²⁷ The Commission determined that a higher percentage of interconnection trunking groups experienced blockage than did Ameritech's interoffice trunking groups serving its retail customers, suggesting that Ameritech's interconnection facilities did not meet the same service standards as those used within its own network.¹²⁸ We seek comment on the value of using a comparison similar to that used in the *Ameritech Michigan 271 Order* for gauging whether interconnection trunks are provided in a nondiscriminatory manner. We also seek comment on which set of interoffice trunk groups incumbent LECs should monitor.¹²⁹

100. As noted above, a competing carrier's ability to provide service to its customers may also be affected by blockage on common trunks located within the incumbent LEC's network behind the point of interconnection. We tentatively conclude that it is necessary to measure common trunk blockage and seek comment on appropriate methods to make such measurements. Specifically, we seek comment on whether incumbent LECs should use the

¹²⁵ The ARMIS Service Quality Report 43-05, for example, already requires incumbent LECs to report on common trunk groups experiencing blockage over a certain threshold for a consecutive three month period. See *ARMIS Revision Order*, ARMIS Quarterly Service Quality Report (FCC Report 43-05) at pp. 5 (Rows 0185, 0186, 0189, 0190), 12, and 13.

¹²⁶ See *Bell Atlantic/NYNEX Merger Order*, 12 FCC Rcd. at 20123, App. D, ¶¶ 19 and 20. B.01 and B.005 are engineering standards that measure the percentage of calls blocked greater than one percent and one-half percent, respectively. See *Newton's Telecom Dictionary*, 11th Edition at 84-85 (1996) (definition of "blocking").

¹²⁷ *Ameritech Michigan 271 Order*, 12 FCC Rcd at 20671, ¶ 240.

¹²⁸ *Id.*

¹²⁹ In the *Ameritech Michigan 271* proceeding, Ameritech did not identify which interoffice trunk groups it was measuring. ALTS has proposed measuring blockage over an incumbent LEC's network by measuring trunk groups from incumbent LEC end office to incumbent LEC end office, incumbent LEC end office to local tandem, and incumbent LEC end office to access tandem. See ALTS Jan. 14 *Ex Parte* at 16.

common trunk data report established in BellCore Special Report SR STS-000317, "Common Trunk Transport Group Performance Data," Issue 2, September 1990. While we recognize that this report was intended to provide information about common trunk blockage to interexchange carriers (IXCs), we seek comment on whether this report can provide useful information for competing carriers as well. We also seek comment on whether incumbent LECs generally use this common trunk data report and whether all the measurements in the report are applicable to competing carriers. Additionally, we seek comment on the utility of requiring incumbent LECs to report on blockage on common trunks within their networks that connect to a point of interconnection, as well as on interoffice common trunks that are not connected to a point of interconnection. We seek comment on an incumbent LEC's ability to separately measure and report on blockage over these two types of common trunks (*i.e.*, those trunk groups that connect to a point of interconnection and those that do not) and whether information about these two types of trunk groups will assist a competing carrier in determining whether it is receiving nondiscriminatory interconnection.

101. Finally, we seek comment on whether an incumbent LEC must measure call completion rates to demonstrate that it is satisfying the statutory requirements of section 251(c)(2). In measuring call completion rates, an incumbent LEC would compare the percentage of calls completed by incumbent LEC customers to competing carrier customers, relative to the percentage of calls completed by incumbent LEC customers to other incumbent LEC customers. In the *Ameritech Michigan 271 Order*, the Commission noted that data regarding the rate of call completion would be useful in assessing the quality of interconnection.¹³⁰ We seek comment on the utility of using this measurement to gauge the quality of interconnection provided by an incumbent LEC and on the benefits of using the call completion measurement in addition to, or instead of, the trunk blockage measurement. We also seek comment on the additional costs or burdens that such a measurement would impose on incumbent LECs.

b. Collocation

102. We tentatively conclude that incumbent LECs must measure certain aspects of providing collocation arrangements, as listed in Appendix A. Section 251(c)(6) and our rules require incumbent LECs to provide physical and virtual collocation as a means of interconnection or access to unbundled network elements.¹³¹ Consequently, we tentatively

¹³⁰ See *Ameritech Michigan 271 Order*, 12 FCC Rcd at 20663, ¶ 224, and 20669, ¶ 235.

¹³¹ See 47 U.S.C. § 251(c)(6) and 47 C.F.R. §§ 51.321, 51.323. Physical collocation enables competing carriers to place their equipment in the incumbent LEC's central office, in order to gain access to network elements and/or interconnect with the incumbent LEC's network. Physical collocation also allows competing carriers physical access to their designated space in the incumbent LEC's central office to install, maintain, and repair their equipment. See *Local Competition First Report and Order*, 11 FCC Rcd at 15784-85, ¶ 559 and n. 1361. Under a virtual collocation arrangement, competing carriers can designate equipment for their use in order to gain access to network elements and/or interconnect with the incumbent LEC's network. In contrast to

conclude that incumbent LECs must provide measurements concerning their provision of collocation facilities to competing carriers, including the response time for initial requests for collocation. We also tentatively conclude that this measurement must be disaggregated between virtual and physical collocation arrangements. The provision of collocation arrangements involves several steps: 1) the initial query by a competing carrier regarding space for collocation, and the incumbent LEC's response to that query; 2) the actual ordering of the collocation arrangement by the competing carrier; and 3) the completion of that arrangement by the incumbent LEC. We tentatively conclude that incumbent LECs must provide the following measurements: 1) Average Time to Respond to a Collocation Request; 2) Average Time to Provide a Collocation Arrangement; and 3) Percentage of Due Dates Missed with respect to the provision of collocation arrangements. We seek comment on the utility of these proposed measurements.

103. We tentatively conclude that the Average Time to Respond to a Collocation Request must be determined by computing the elapsed time from the incumbent LEC's receipt of a request for collocation by a competing carrier to the time the incumbent LEC responds to such a request.¹³² The Average Time to Provide a Collocation Arrangement must be calculated from the time that the competing carrier submits an order for a collocation arrangement to the time that the arrangement is made available to the competing carrier. Finally, an incumbent LEC must calculate the Percentage of Due Dates Missed by comparing the number of times it missed a committed date for providing collocation facilities to the total number of confirmed due dates for collocation arrangements during the reporting period. We also tentatively conclude that incumbent LECs must disaggregate these measurements by virtual and physical collocation arrangements. We seek comment on these tentative conclusions.

V. REPORTING PROCEDURES

104. We also propose model procedures to assist states considering how performance measurements should be reported. These model reporting procedures are intended to facilitate access by competing carriers and states to the measurements produced by the incumbent LECs so that carriers and states can determine whether incumbent LECs are satisfying their statutory obligations pursuant to section 251.¹³³ This section discusses proposals regarding: (1) who should receive the reports; (2) the frequency of reports; and (3) auditing procedures.

physical collocation, competing carriers do not have physical access to their equipment in a virtual collocation arrangement. *Id.*

¹³² A response to a request for collocation includes, for example, a determination of space availability, the price for such collocation, and other factors necessary to allow a competing carrier to decide whether to proceed with the order for the collocation arrangement.

¹³³ See 47 U.S.C. § 251(c)(3) and (c)(4).

105. In considering these issues, we believe that there are two important objectives. First, an incumbent LEC should provide sufficient information to competing carriers or states so that they can determine whether an incumbent is complying with the nondiscrimination and just and reasonable requirements of section 251.¹³⁴ If a competing carrier believes that the reports demonstrate a violation of section 251, the carrier may use the reports as a basis for discussions with the incumbent LEC or to pursue remedial action before a regulatory body or court. At the same time, we are equally mindful of the costs associated with collecting this data and generating these reports. Therefore, the proposed procedures are intended to minimize to the extent possible the costs and burdens associated with complying with the reporting requirements. We seek comment on whether these proposals meet these two objectives. We also seek comment on any other procedures that may enhance access to this information at minimum cost and burden to incumbent LECs.

A. Receipt of Reports

106. We seek comment on who should receive these reports from the incumbent LECs on a regular basis. We believe that the main purpose of these performance reports is to permit competing carriers to determine whether they are obtaining access consistent with the requirements of section 251. We further believe that it is the responsibility of the competing carriers to review the reports, assess whether there is discrimination or failure to provide a reasonable opportunity to compete, and determine whether any such discrimination or other problem is competitively significant. Competing carriers can then decide whether to try to resolve the problem through discussions with the incumbent LEC, or whether some other action, such as filing a complaint, is required. We tentatively conclude, therefore, that only those carriers that already obtain services or facilities from the incumbent LEC through an interconnection agreement,¹³⁵ or under a statement of generally available terms,¹³⁶ should have the opportunity to receive reports. Commenters that believe that other groups of carriers, such as those considering whether to enter the market, should also receive reports should explain why the benefits of their receiving reports outweigh the costs to incumbent LECs.

107. In order to minimize unnecessary costs or burdens for incumbent LECs, we further conclude that an incumbent LEC should provide reports to an individual competing carrier only after receiving a request from the competing carrier for such reports. We believe that this process will enable a competing carrier to obtain readily the performance reports and data that it wants without requiring incumbent LECs to prepare reports unnecessarily for carriers that do not want them.

¹³⁴ See *id.*

¹³⁵ See 47 U.S.C. § 252(a)-(b).

¹³⁶ See 47 U.S.C. § 252(f).

108. States may also have an interest in reviewing performance reports. With respect to whether state officials should receive a copy of the reports that we propose in this Notice, we tentatively conclude that individual states can best assess whether they wish to receive the reports. Depending upon the competitive developments in their markets, states may want to monitor and compare the quality of access that incumbent LECs provide competing carriers. States are therefore in the best position to determine whether they need to review the reports on a regular basis. While this Commission may not need to review reports on a regular basis, we note that the Commission could obtain the reports upon request.

109. Finally, we seek comment on whether reports should be filed with a central clearinghouse so that state commissions, other competing carriers, or the general public can review an incumbent LEC's performance in different states. An individual state might want this information to compare an incumbent LEC's performance in its state with performance in other states. Such comparisons may help those states that wish to establish service quality standards, for example. Competing carriers might also want to compare the services and access to OSS they receive from an incumbent LEC with that provided to competing carriers in other states. We seek comment on the benefits and costs involved in developing such a clearinghouse. We also seek comment on what entity should act as a clearinghouse, *e.g.*, a coalition of regulators (such as NARUC) or another organization.

110. We recognize that parties may be concerned about disclosing confidential measurement results if results particular to an incumbent LEC or to an individual competing carrier are reported broadly. An incumbent LEC may not wish to divulge measurement results relating to the provision of services to itself or to its local exchange affiliates. A competing carrier may also have concerns about the disclosure of its individual measurement results, which will show the manner in which it receives services and facilities from the incumbent LEC and also which services and facilities it receives. A number of competing carriers have proposed, for example, that incumbent LECs report individual competing carrier results only to that competing carrier so that other competing carriers do not obtain competitive information.¹³⁷ Under this proposal, other competing carriers and the general public would have access only to aggregate competing carrier measurement results. We seek comment on the need to keep individual competing carrier information confidential and on the proposal that only aggregate measurement results be made available to other competing carriers or to the general public.

111. With respect to incumbent LEC measurement results, we believe that individual competing carriers must have access to incumbent LEC results so that they can make a meaningful comparison with their own data. We seek comment, however, on whether incumbent LEC measurement results should be protected from disclosure to non-requesting competing carriers or to the general public. If regulatory agencies request incumbent LEC and competing carrier measurement results, we ask parties to comment on whether protective

¹³⁷ See, *e.g.*, MCI Comments at 8; WorldCom Comments at 7; LCUG proposal at 5.

measures are necessary and to propose appropriate mechanisms to keep those results confidential. Similarly, we ask parties to comment on whether competing carriers that receive incumbent LEC measurement results should be required to limit their use and disclosure of those results and to propose appropriate mechanisms for guarding against improper use.¹³⁸

B. Frequency of Reports

112. We also seek comment on how frequently incumbent LECs should file performance reports with competing carriers once requested by those carriers. A number of competing carriers have requested that incumbent LECs file performance reports on a monthly basis.¹³⁹ We recognize the value of reporting on such a frequent basis, especially while competition is still developing, because monthly reporting would enable competing carriers to detect any discriminatory conduct soon after it occurred. On the other hand, we recognize that there could be significant costs attached to monthly reporting, as opposed to quarterly or less frequent reporting. We, therefore, seek comment on the costs and benefits of requiring monthly reporting, as opposed to reporting on a less frequent basis, such as quarterly. We also seek comment on how quickly an incumbent LEC should provide a performance report after it is requested.

C. Auditing Requirements

113. As part of a performance monitoring mechanism, several competing carriers proposed that competing carriers be given a reasonable opportunity to conduct audits of performance reports.¹⁴⁰ These commenters have stated that periodic auditing of the performance reports is necessary to ensure that incumbent LECs are using appropriate methodologies and are accurately reporting the required measurements.¹⁴¹ We believe, however, that some audits may be unnecessary or unduly burdensome for the incumbent LEC. We therefore seek comment on the need to conduct such audits as part of a model performance monitoring scheme. We also seek comment on the types of audits that might impose undue burdens. Finally, we seek comment on mechanisms that will permit competing carriers to conduct audits, when necessary, while protecting incumbent LECs from unduly

¹³⁸ The Commission created a Model Nondisclosure Agreement, for example, to be used by parties seeking access to confidential cost models and associated materials filed in support of ONA tariffs. *See In the Matter of Commission Requirements for Cost Support Material To Be Filed With Open Network Architecture Access Tariffs*, Memorandum Opinion and Order, 7 FCC Rcd 1526 (1992).

¹³⁹ *See, e.g.*, LCI/CompTel Petition at 12-13; AT&T Comments at 24; Sprint Comments at 10; TRA Comments at 4-5; WorldCom Comments at 6; Excel Comments at 12.

¹⁴⁰ *See, e.g.*, LCUG proposal at 6; AT&T Comments at 28-29; MCI Comments at 8; WorldCom Comments at 9.

¹⁴¹ *See, e.g.*, MCI Comments at 8.

burdensome or unnecessary audits.¹⁴² In addressing this issue, we ask parties to comment on who should pay for the costs of the audit.

114. In addition to audits, LCUG also proposed that an incumbent LEC should make available, at a competing carrier's request, the raw data underlying a report at the same time it provides the performance report to that competing carrier.¹⁴³ The raw data is that data captured by the incumbent LEC, such as the individual stop and start times, that are used to produce the measurement results. The competing carrier could use this data to validate the incumbent LEC's performance measurements or to perform additional statistical tests to determine whether there is a statistically significant difference in the way in which an incumbent LEC provisions itself compared with the way in which it provisions competing carriers.¹⁴⁴ We seek comment on whether model reporting procedures should include providing access to raw data at this initial stage, rather than in the context of an audit. We recognize that there may be additional burdens or costs to the incumbent LEC in providing the raw data to a competing carrier and that incumbent LECs may wish to keep data regarding services and facilities they provide to themselves confidential.¹⁴⁵ We seek comment on the types and magnitudes of these burdens or costs. To the extent that commenters support regular provision of the raw data, they should explain why the advantages of obtaining such data outweigh these costs.

115. Finally, we seek comment on how long the incumbent LEC should retain the underlying data. One party proposed that an incumbent LEC retain the data for two years.¹⁴⁶ We seek comment on whether this is an appropriate period for retention, or whether such a requirement is excessive if a competing carrier is also permitted to obtain the raw data on a regular basis along with the report.

VI. EVALUATION OF PERFORMANCE MEASUREMENTS

116. As noted above, we believe that performance measurements and reporting requirements are necessary to ensure that incumbent LECs provide interconnection and access to OSS functions and OS/DA in compliance with the statutory requirements of section 251 of

¹⁴² AT&T has proposed, for example, that incumbent LECs be able to limit the number of audits conducted by a competing carrier and require that competing carriers coordinate audits. See AT&T Comments at 28-29.

¹⁴³ LCUG proposal at 5.

¹⁴⁴ See Appendix B for discussion of statistical analysis of data. In that discussion, we also seek comment on how the data should be formatted to facilitate statistical testing.

¹⁴⁵ See also *supra* ¶¶ 110, 111, discussing confidentiality concerns associated with the disclosure of an individual competing carrier's and incumbent LEC's measurement results.

¹⁴⁶ See AT&T Comments at 29 and Reply Comments at 17.